

IN THE CLAIMS

*Please amend claims as follows:*

1. (Currently amended) The data structure of claim 63, wherein

the primitive is a get presence primitive provided by a client of a requesting user to a server to request presence information of a requested user, the get presence primitive has various information elements including a requesting user identifier, a requested user identifier, and a list of presence values requested,

and wherein in response to the get presence primitive, a presence ~~info~~-primitive is provided by the server to the client of the requesting user, and the presence ~~information~~ primitive has various information elements including the requested user identifier and a list of presence values supplied.

2. (Previously presented) The data structure of claim 63, wherein

the primitive is a request presence authorization primitive provided by a server to a client of a requested user to request authorization to provide presence information of the requested user to a requesting user, the request presence authorization primitive includes various information elements including a requesting user identifier,

and wherein in response to the request presence authorization primitive, an authorize presence primitive is provided by the client of the requested user to the server to authorize transfer of the presence information of the requested user to the requesting user, and the authorize presence primitive includes various information elements including the requesting user identifier.

3. (Previously presented) The data structure of claim 63, wherein

the primitive is an update presence primitive provided by a client of an updating user to a server to update presence information of the updating user, and the update presence primitive includes various information elements including an updating user identifier and a list of presence values to be updated.

4. (Previously presented) The data structure of claim 63, wherein

the primitive is a subscribe presence primitive provided by a client of a subscribing user to a server to request a subscription to presence information of a requested user, and

the subscribe presence primitive includes various information elements including a subscribing user identifier and a requested user identifier.

5. (Previously presented) The data structure of claim 63, wherein

the primitive is an authorize presence primitive autonomously provided by an initiating client to a server to authorize transfer of presence information of a user of the initiating client to an authorized user, and the autonomously provided authorize presence primitive includes various information elements including an identifier identifying the user of the initiating client.

6. (Currently amended) The data structure of claim ~~46~~63, wherein

said presence attributes are information ~~is~~ classifiable in any one or more of the following: client reachability, user availability, user personal status, user or client location, and client capabilities.

7. (Previously presented) The data structure of claim 63, wherein

the primitive is a message primitive provided by a message sending client of a message sending user to a message server and from the message server to a message receiving client, and

the message primitive has various information elements including a message sending client identifier, a message sending user identifier, and a message content type identifier.

8. (Previously presented) The data structure of claim 7, wherein

in response to the message primitive, a delivery primitive is provided by the message server to the message sending client, and

the delivery primitive has various information elements including a delivery status element.

9. (Currently amended) The data structure of claim 63~~64~~, wherein in response to the invite group primitive,

~~the primitive is a join group primitive~~ is provided by a joining client to a~~the~~ message server, and

the join group primitive has various information elements including a group identifier and an indication of acceptance.

10. (Previously amended) The data structure of claim 63, wherein

the primitive is a leave group primitive provided by a leaving client of a leaving user to a message server, and

the leave group primitive includes various information elements including an identification of a session, an identification of the group and a leaving user identifier.

11. (Previously presented) The data structure of claim 10, wherein

in response to the leave group primitive, a group left primitive is provided by the message server to the leaving client, and

the group left primitive includes various information elements including an identifier of a reason for leaving.

12. (Currently amended) The data structure of claim 63, wherein

the primitive is a create group primitive provided by a group creating client of a group creating user to a server, and

the create group primitive includes various information elements including a message identifier, a transaction identifier and an identifier of properties of the group.

13. (Previously presented) The data structure of claim 9, wherein the join group primitive further includes an information element of transaction identifier.

14. (Currently amended) The data structure of claim 63, wherein

the primitive is a delete group primitive provided by a deleting client of a deleting user to a server, and

the delete group primitive includes various information elements including a message identifier, a transaction identifier and a group identifier.

15. (Currently amended) The data structure of claim 63, wherein

the primitive is a modify group primitive provided by a modifying client of a modifying user to a server, and

the modify group primitive includes various information elements including a message identifier, a transaction identifier and a group identification.

16. (Currently amended) The data structure of claim 63, wherein

the primitive is a get group info primitive provided by a client of a user requesting group information to a server, and

the get group info primitive includes various information elements including a message identifier, a transaction identifier and a group identifier.

17. (Currently amended) The data structure of claim ~~463~~, wherein said presence values are associated with corresponding presence attributes classified and typed according to a standard.

18. (Previously presented) A device having means for at least temporarily storing a data structure for transmission or reception, wherein said data structure is according to claim 63.

19. (Previously presented) A system having at least one server able to communicate with a plurality of devices, wherein a communication protocol is used between the at least one server and the plurality of devices with a data structure according to claim 63.

20. (Previously presented) The system of claim 19, wherein the communication protocol is used in providing presence information of a user of a device, the presence information is

included in a primitive with one or more information elements containing presence values and said presence values have associated space and time information useable by said at least one server to modify said presence values or related presence values.

21. (Previously presented) The system of claim 20, wherein said presence values have a validity attribute associated to said space and time information.

22. (Currently amended) Presence information service management method for use by a server capable of communicating with plurality of users through their respective clients, wherein the presence information is requested or provided in primitives, said method comprising:

receiving an authorize presence primitive from an authorizing user authorizing access to selected presence information of said authorizing user,

receiving an update presence primitive from an updating user, wherein said update presence primitive includes one or more presence values to be updated,

receiving a get presence primitive from a requesting user for requesting presence information of a requested user, to which a response including requested presence information is required, or receiving a subscribe presence primitive from a subscribing user for requesting presence information of the requested user, to which on-going responses including requested presence information are required,

determining if access to said presence information of the requested user has been authorized or pre-authorized and, if not, requesting authorization from the requested user, and if authorized or pre-authorized,

providing a presence ~~info~~-primitive including said requested presence information of the requested user to the requesting user, or providing presence ~~info~~-primitives including requested presence information on an on-going basis to said subscribing user, particularly after receiving an update of said presence information from said requested user,

wherein the presence information comprises one or more presence attributes, the values of the attributes indicating presence status of a user or a client of the user at the time the presence information is provided.

23. (Previously presented) The presence information service management method of claim 22, wherein each said primitive has various mandatory information elements including a message identifier, a transaction identifier, and an identification of a requested user and/or a requesting user.

24. (Currently amended) The presence information service management method of claim ~~23~~22, wherein ~~each said primitive has at least one optional information element comprising a list of presenece values requested~~ said presence attributes are classifiable in any one or more of the following: client reachability, user availability, user personal status, user or client location, and client capabilities.

25. (Previously presented) The presence information service management method of claim 22, wherein said requesting authorization from a requested user is carried out by providing a request presence authorization primitive having various mandatory information elements including a message identifier, an authorization request transaction identifier, a requesting user identifier and a list of presence values.

26. (Previously presented) The presence information service management method of claim 22, wherein said authorize presence primitive has various mandatory information elements including a message identifier, an transaction identifier, a requesting user identifier, and a list of presence values.

27. (Previously presented) The presence information service management method of claim 26, wherein said authorize presence primitive has at least one optional information element comprising a group identifier if authorization is related to a group.

28. (Previously presented) The presence information service management method of claim 22, wherein a buddy list user maintains one or more buddy lists on the server for sending messages to one or more recipient users separately or to every user on a buddy list, wherein

the recipient users are not necessarily aware of the buddy list and cannot refer to the buddy list with any replies they make, and said buddy list user maintaining one or more buddy lists on said server is able to access presence information of one or more users on the buddy list.

29. (Currently amended) The presence information service management method of claim 22, further comprising:

- receiving a join group primitive from a joining member user joining a private user group,

- providing presence ~~info~~-primitives indicative of presence information of member users of said private user group to said joining member user upon joining said private user group but not after departing, and

- providing a group left primitive indicative of a departing member user to remaining private user group member users upon receipt of a leave group primitive indicative of said departing member user.

30. (Previously presented) The presence information service management method of claim 29, wherein the member user may join the group only if said join group primitive is preceded by an invite user primitive provided by an inviting user to said joining member user.

31. (Previously presented) The presence information service management method of claim 22, further comprising:

- receiving a create group primitive from a member user creating a user group, said create group primitive having information elements indicative of identification of a client used by the user creating the user group, identification of the member user creating the user group, and a list of member users of the user group,

- reporting to the member users with a group information primitive indicative of establishment of the user group and selected group information, and

- permitting member users of the user group to interchange message primitives.

32. (Previously presented) The method of claim 31, further comprising:  
receiving a get group information primitive from a requesting member user, and  
providing a group information primitive indicative of selected group information to the requesting member user.
33. (Previously presented) The method of claim 31, further comprising:  
receiving a modify group primitive from a requesting member user of a user group,  
and  
providing a group information primitive indicative of modified group information to the requesting member user.
34. (Previously presented) The method of claim 31, further comprising:  
receiving a delete group primitive from a requesting member user of a user group,  
and by  
providing to the member users of said user group a status primitive indicative of disestablishment of said user group.
35. (Previously presented) The presence information service management method of claim 22, further comprising:  
receiving a store content primitive from a storing user,  
storing any content conveyed in a content information element of said content primitive along with or according to information elements identifying said store content primitive, a store transaction, a storing user, a storing client used by said storing user, a group, properties of said content, and a header of said content,  
providing a content information primitive to member users in said group having information elements identifying said content information primitive, said store transaction, and said header,



receiving a get content information primitive from a retrieving user in said group having information elements identifying said get content primitive, a retrieval transaction, the retrieving user, a retrieving client used by said retrieving user, and said group, and providing a receive content primitive to said retrieving user having information elements identifying said receive content primitive, said retrieval transaction, said group, said content, said header of said content, and having an information element containing shared content for storing among said member users.

36. (Previously presented) The method of claim 29, further comprising:

receiving a delete content primitive from a deleting user, said delete content primitive having information elements identifying said primitive, a delete transaction, the deleting user, a deleting client used by said deleting user, said group, and content for deletion, and deleting said shared content.

37. (Previously presented) The presence information service management method of claim 22, further comprising:

providing a content information primitive to a notified user from a server having information elements identifying said content information primitive, a store transaction, and a header,

receiving a get content information primitive from said notified user having information elements identifying said get content primitive, a retrieval transaction, and said notified user, and

providing a receive content primitive from said server to said notified client having information elements identifying said receive content primitive, said retrieval transaction, said header, and having an information element containing shared content.

38. (Previously presented) The method of claim 34 for adding to said shared content at said server by a storing user, further comprising:

receiving a store content primitive at said server having content in an information element thereof for said adding to said shared content along with or according to information elements identifying said store content primitive, a store transaction, the storing user and a header.

39. (Previously presented) The method of claim 37 for deleting from said shared content at said server by a deleting user, further comprising:

receiving a delete content primitive from said deleting user at said server, said primitive having information elements identifying said delete content primitive, a delete transaction, the deleting user and content for deletion.

40. (Previously presented) The presence information service management method of claim 22, further comprising an exception management method for use in exception handling of a transaction by a user or a server in responding to a request by said server or said user, respectively, said exception management method comprising:

providing a status primitive in said responding to said request for indicating success or failure of said transaction as well as further information contained in information elements of said status primitive, and

receiving said status primitive in said requesting server or said requesting user for recognizing said indication of success or failure.

41. (Original) The method of claim 40, wherein said information elements include a message identifier, a transaction identifier, and a status value indicative of said success or failure.

42. (Currently amended) A server for carrying out a presence information service management method for plurality of users through their respective clients, wherein the presence information is requested or provided in primitives, said server comprising:

means for receiving an authorize presence primitive from an authorizing user authorizing access to selected presence information of said authorizing user,

means for receiving an update presence primitive from an updating user, wherein said update presence primitive includes one or more presence values to be updated,

means for receiving a get presence primitive from a requesting user for requesting presence information of a requested user, to which a response including requested presence information is required, or receiving a subscribe presence primitive from a subscribing user, to which on-going responses including requested presence information are required,

means for determining if access to said presence information of the requested user has been authorized and, if not, for requesting authorization from the requested user, and

means for providing a presence ~~info~~-primitive including said requested presence information of the requested user to the requesting user, or providing presence ~~info~~ primitives including requested presence information on an on-going basis to said subscribing user, particularly after receiving an update of said presence information from said requested user,

wherein the presence information comprises one or more presence attributes, the values of the attributes indicating presence status of a user or a client of the user at the time the presence information is provided.

43. (Previously presented) The server of claim 42, wherein each said primitive has various mandatory information elements including a message identifier, a transaction identifier, and an identification of a requested user and/or a requesting user.

44. (Currently amended) The server of claim ~~43~~<sup>42</sup>, wherein ~~each said primitive the~~ presence attributes are classifiable in any one or more of the following: client reachability, user availability, user personal status, user or client location, and client capabilities~~has at least one optional information element comprising a list of presence values requested.~~

45. (Previously presented) The server of claim 42, wherein said means for requesting authorization from a requested user is configured to provide a request presence authorization primitive having various mandatory information elements including a

message identifier, an authorization request transaction identifier, a requesting user identifier and a list of presence values.

46. (Previously presented) The server of claim 42, wherein said presence information is authorized by an authorizing user in an authorizing presence primitive, said authorize presence primitive having various mandatory information elements including a message identifier, an authorization request transaction identifier, a requesting user identifier, and a list of presence values.

47. (Previously presented) The server of claim 46, wherein said authorize presence primitive has at least one optional information element comprising a group identifier if authorization is related to a group.

48. (Previously presented) The server of claim 42, wherein a buddy list user maintains one or more buddy lists on the server for sending messages to one or more recipient users separately or to every user on a buddy list, and wherein the recipient users are not necessarily aware of the buddy list and cannot refer to the buddy list with any replies they make, and said buddy list user maintaining one or more buddy lists on said server is able to access presence information of one or more users on the buddy list.

49. (Currently amended) The server of claim 42, further comprising:

means for receiving a join group primitive from a joining member user joining a private user group,

means for providing presence ~~info~~-primitives indicative of presence information of member users of said private user group to said joining member user upon joining said private user group but not after departing, and

means for providing a group left primitive indicative of a departing member user to remaining private user group member users upon receipt of a leave group primitive indicative of said departing member user.

50. (Previously presented) The server of claim 49, wherein the joining member user may join the group only if said join group primitive is preceded by an invitation to join primitive provided by an inviting user to said joining member user.

51. (Previously presented) The server of claim 42, further comprising:

means for receiving a create group primitive from a member user creating a user group, said create group primitive having information elements indicative of identification of a client used by the user creating the user group, identification of the member user creating the user group, and a list of member users of the user group,

means for reporting to the member users with a group information primitive indicative of establishment of the user group and selected group information, and

means for permitting member users of the user group to interchange message primitives.

52. (Previously presented) The server of claim 51, further comprising:

means for receiving a get group information primitive from a requesting member user, and

means for providing a group information primitive indicative of selected group information to the requesting member user.

53. (Previously presented) The server of claim 51, further comprising:

means for receiving a modify group primitive from a requesting member user of a user group, and

means for providing a group information primitive indicative of modified group information to the requesting member user.

54. (Previously presented) The server of claim 51, further comprising:

means for receiving a delete group primitive from a requesting member user of a user group, and

means for providing r to the member users of said user group a status primitive indicative of disestablishment of said user group.

55. (Previously presented) The server of claim 42, further comprising:

means for receiving a store content primitive from a storing user,

means for storing any content conveyed in a content information element of said content primitive along with or according to information elements identifying said store content primitive, a store transaction, a storing user, a storing client used by said storing user, a group, properties of said content, and a header of said content,

means for providing a content information primitive to member users in said group having information elements identifying said content information primitive, said store transaction, and said header,

means for receiving a get content information primitive from a retrieving user in said group having information elements identifying said get content primitive, a retrieval transaction, the retrieving user, a retrieving client used by said retrieving user, and said group, and

means for providing a receive content primitive to said retrieving user having information elements identifying said receive content primitive, said retrieval transaction, said group, said content, said header of said content, and having an information element containing shared content for storing among said member users.

56. (Previously presented) The server of claim 49, further comprising:

means for receiving a delete content primitive from a deleting user, said delete content primitive having information elements identifying said delete content primitive, a delete transaction identifier, a deleting user identifier, a deleting client used by said deleting user, said group, and content for deletion, and

means for deleting said shared content.

57. (Previously presented) The server of claim 42, further comprising:

means for providing a content information primitive to a notified user from a server having information elements identifying said content information primitive, a store transaction, and a header,

means for receiving a get content information primitive from said notified user having information elements identifying said get content primitive, a retrieval transaction, and said notified user, and

means for providing a receive content primitive from said server to said notified client having information elements identifying said receive content primitive, said retrieval transaction, said header, and having an information element containing shared content.

58. (Previously presented) The server of claim 57, further comprising:

means for receiving a store content primitive at said server having content in an information element thereof for said adding to said shared content along with or according to information elements identifying said store content primitive, a store transaction, the storing user and a header.

59. (Previously presented) The server of claim 57, further comprising:

means for receiving a delete content primitive from said deleting user at said server, said primitive having information elements identifying said delete content primitive, a delete transaction, the deleting user and content for deletion.

60. (Previously presented) The server of claim 42, further comprising:

means for use in exception handling of a transaction by a user or the server in responding to a request by said server or said user, respectively,

means for providing a status primitive in said responding to said request for indicating success or failure of said transaction as well as further information contained in information elements of said status primitive, and

means for receiving said status primitive in said requesting server or said requesting user for recognizing said indication of success or failure.

61. (Original) The server of claim 60, wherein said information elements include a message identifier, a transaction identifier, and a status value indicative of said success or failure.

62. (Previously presented) A system for the management of presence information for use in a communication system comprising:

a client; and

a server in the network, wherein the client and the server are able to exchange presence information having a data structure according to claim 63.

63. (Currently amended) A data structure of a presence primitive, used in a presence information management system for requesting or providing presence information, said primitive is assembled by a transmitting entity with information elements, stored at least temporarily in a computer-readable storage medium of the transmitting entity, transferred as a message to a receiving entity over a network, stored at least temporarily in a computer-readable storage medium in the receiving entity, and disassembled and processed or repackaged for further transmittal by the receiving entity,

wherein the information elements comprise an information element identifying the message, ~~and an information element identifying a user of the transmitting entity or a user of the receiving entity or both,~~ and an information element indication presence information requested or supplied,

and wherein the presence information comprises one or more presence attributes, the values of the attributes indicating presence status of a user or a client of the user at the time the presence information is provided.

64. (New) The data structure of claim 63, wherein

the primitive is a invite group primitive provided by an inviting client of an inviting user to one or more invited users,



the invite group primitive has various information elements including an inviting user identifier, an inviting client identifier, a list of one or more users invited to a group, and an identifier of said group.